



Asphalt Fumes: Roofing Operations

Asphalt fumes cause health effects such as headaches, nausea, and drowsiness. They are also linked to lung cancer. Asphalt kettles used in roofing operations cause both continuous exposure to fumes that escape and occasional exposures when the lid is opened for filling or loading. In general, the higher the asphalt temperature, the more fumes are produced.

Bill's Story

Bill is operating an asphalt kettle for a roofing company. He is careful to use personal protective equipment, including a hardhat, face shield, long-sleeved shirt, gloves, goggles, and leather work boots. He keeps the work area cleaned up and has a fully charged ABC fire extinguisher nearby. Bill started having headaches, drowsiness, and nausea while working and went home sick. When he returned, his co-workers showed him the new kettle bought because the old one had a damaged lid and was leaking fumes.

- ✘ What caused this incident?
- ✘ How could this have been prevented?
- ✘ Have you ever had any of the symptoms Bill had, or known someone who has? If so, what happened?

Remember This

- Place the kettle:
 - Downwind, where the operator and others will be least exposed to fumes.
 - In an area with plenty of cross-breezes, with the lid kept closed as much as possible.
 - On firm, level ground to avoid tipping or spilling.
- **Do not** place the kettle in a confined space where fumes can accumulate.
- The supervisor must mark the immediate area around the kettle with warning tape, traffic cones, and/or signs to keep other workers away.
- Make sure the kettle is in good operating condition. Report any defects to your foreman or superintendent.
- Make sure the kettle has working temperature controls and the proper pumping capacity for its size.
- Keep temperatures to the minimum required to do the task. Avoid turning temperatures up for faster melt.
 - Maintain temperatures at least 25 degrees below the asphalt's flash point to prevent fires.
 - Remove **all** potential fire hazards from the area.
 - Keep a fully charged ABC-type fire extinguisher near the kettle.
- Pre-chop the asphalt into easily handled, easily melted pieces before filling or refilling the kettle. Use a safety loading door, not the lid, to fill the kettle.
- Ask your employer to use fume-suppressing asphalt.

How can we stay safe today?

What will we do at the worksite to prevent exposure to asphalt fumes and related hazards on residential roof jobs?

OSHA Standard: 1926.59 and OSH General Duty Clause, Section 5(a)(1) of the OSH Act



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- ☑ Make sure the kettle is in good operating condition and report any defects to your supervisor.
- ☑ Keep the kettle lid closed as much as possible and place kettle in an open area with plenty of natural cross breezes. **Do not** place in a confined space where fumes can accumulate. Place the kettle downwind, where the operator and others will be least exposed.
- ☑ Set the kettle on firm, level ground to avoid tipping or spilling.

GET INFORMATION

CDC/NIOSH INFO: 1-800-CDC-INFO (1-800-232-4636) | TTY: 1-800-232-6348 | cdc.gov/info | cdc.gov/niosh
CPWR: Contact 301-578-8500 | cpwr-r2p@cpwr.com | cpwr.com/toolbox-talks
DHHS (NIOSH) Publication No. 2022-138 | DOI: <https://doi.org/10.26616/NIOSH PUB2022138> | August 2022